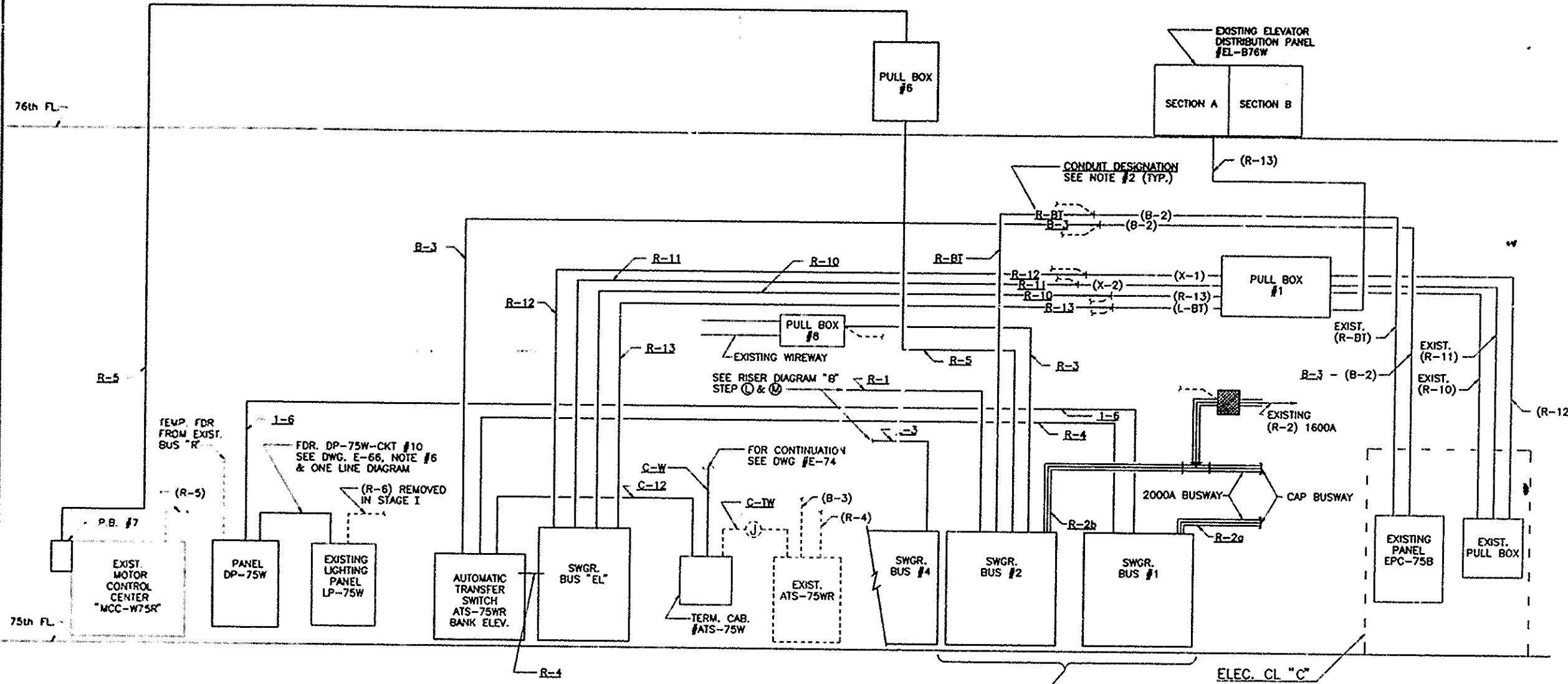


75th FL



RISER DIAGRAM "A"  
STAGE III STEP (H) - DWG #E-6

- FOR COMPLETE STAGE III INSTALLATION SEE DWG. #E-6
- TRANSFER OF LOADS SHOWN ABOVE IS DESCRIBED IN SCHEDULE BELOW.

NOTE

1. - FOR LEGEND SEE DWG. #E-1, FOR GENERAL NOTES AND ABBREVIATIONS SEE DWG. #E-2.
2. - FOR NUMBER AND SIZE OF CONDUIT & WIRE SEE:
  - o DWG. #E-70 - CONDUIT AND CABLE SCHEDULE
  - o DWG. #E-89 - ATS CONNECTION DIAGRAM
3. - FOR B-3 WILL TEMPORARILY SUPPLY BOTH NEWLY INSTALLED & EXIST. BANK ELEV. TRANSFER SWITCHES.
4. - CONDUIT CABLE AND BUSWAY DESCRIBED IN SCHEDULE STAGE III STEP (H) SHALL BE INSTALLED PRIOR TO ENERGIZING BUS #1, 2 & EL. FEEDERS THAT USE EXIST. FEEDER CONDUITS SHALL BE INSTALLED WITH SWITCHGEAR ENERGIZED.
5. - SCHEDULE STAGE III STEP (I) & (N) SHALL BE INSTALLED WITH SWITCHGEAR ENERGIZED.
6. - ALL ELECTRICAL OUTGAGES SHALL BE PERFORMED OUTSIDE NORMAL BUILDING HEATING HOURS. SEE SPECIFICATIONS DIVISION I ENTITLED "CONDITIONS AND PRECAUTIONS" FOR DESCRIPTION OF ELECTRICAL POWER OUTAGE CATEGORIES.

✓ (SEE NOTE #5)

SCHEDULE STAGE III STEP (L) & (M)  
TRANSFER LOADS L-3 & R-1

- 1-3 208/120V TRANSF. ELEC. CLOS. "W" 59-74th FLR'S.**
- a. - INSTALL TRANSFORMER "1-3" WITH CGR-13.
  - b. - INSTALL 1-3 CDT. & WIRE FROM SWGR BUS #4 TO TRANSF. "1-3" (CONNECT AT TRANSF.)
  - c. - INSTALL BUSWAY 1-3<sub>20</sub> FROM CGR-13, END AT BUSWAY
  - d. - REMOVE EXIST. BUSWAY EXIST. TRANSF. "1-3".
  - e. - INSTALL BUSWAY TRANSITION BOX ON EXIST. BUSWAY & CONNECT BUSWAY 1-3<sub>20</sub>.
  - f. - DISCONNECT EXIST. FDR. 1-3-TEMP AND CONNECT FDR. 1-3 AT SWGR. (ENERGIZE)
  - g. - REMOVE EXIST. TRANSF. "1-3", DISC. SW. AND FDR. (1-3-TEMP) TO SWGR.
- 1-3 208/120V TRANSF. ELEC. CLOS. "W" 77-93rd FLR'S.**
- a. - INSTALL TRANSFORMER "R-1" WITH CGR-1.
  - b. - INSTALL R-1 CDT. & WIRE FROM SWGR BUS #2 TO TRANSF. "R-1". (CONNECT AT TRANSF.)
  - c. - INSTALL BUSWAY R-1<sub>10</sub> FROM CGR-1, END AT BUSWAY
  - d. - REMOVE EXIST. BUSWAY TO EXIST. TRANSF. "R-1".
  - e. - INSTALL BUSWAY TRANSITION BOX ON EXIST. BUSWAY & CONNECT BUSWAY R-1<sub>10</sub>.
  - f. - DISCONNECT EXIST. FDR. R-1-TEMP AND CONNECT FDR. R-1 AT SWGR. (ENERGIZE)
  - g. - REMOVE EXIST. TRANSF. R-1, DISC. SW. AND FDR. (R-1-TEMP) TO SWGR.

LOAD OUTAGES - SEE NOTE #8  
\* = CATEGORY "A" OR "B"

14 - CATEGORY A OR B

SCHEDULE - STAGE III, STEP (H) - TRANSFER LOADS TO BUS #1, 2 & EL

LOAD OUTAGES - SEE NOTE #6

\* = CATEGORY "A" OR "B"  
\* \* = CATEGORY "C"

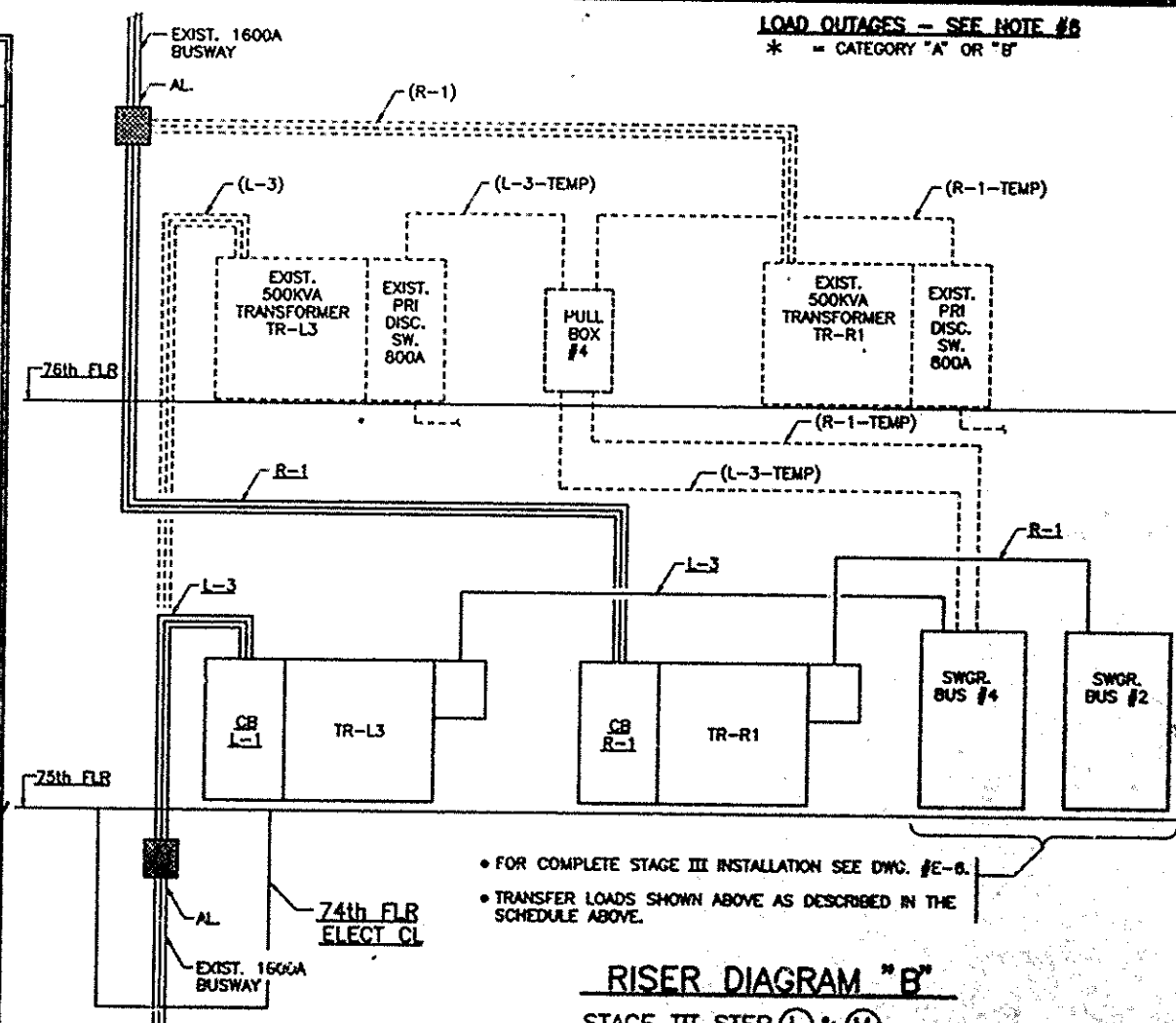
- CONDUIT DESIGNATION - BANK ELEVATORS -
- R-4 NORMAL FEEDER TO BUS #1
- a. - INSTALL R-4 CDT & WIRE FROM SWGR. BUS #1 TO BUS #EL VIA TRANSFER SWITCH (ENERGIZE)
- R-3 EMERG. FEEDER TO BUS #1
- a. - CUT EXIST. CDT. B-2 & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-3 FROM TRANSFER SWITCH TO ONE EXIST. R-2 CDT. & CONNECT.
  - c. - INSTALL FOR B-2 FROM TRANSFER SWITCH TO EXIST. PNL. EPC-758, USING CDT. (B-2).
  - d. - DISCONNECT EXIST. FDR'S ONE TO EACH NORTH & SOUTH SUBSTATION
  - e. - REMOVE EXIST. DOUBLE LUG & INSTALL TRIPPLE LUGS PER PHASE AT PNL. EPC-758. CONNECT FDR'S, 3 AT #3
- C CONTROL FOR BANK ELEVATORS
- a. - DISCONNECT EXIST. AND CONNECT CONTROL WIRING DESIGNATED 42 ON DWG #E-99.
- R-13 BANK "D" ELEV.
- a. - CUT EXIST. CDT. (L-BT) & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-13 FROM BUS #EL TO EXIST. CDT. (L-BT) & CONNECT
  - c. - DISCONNECT EXIST. FDR (R-13) IN PNL. EL-876 & REMOVE BACK TO EXIST. SWGR.
  - d. - INSTALL FOR R-13 FROM BUS #EL TO EXIST. PNL. EL-876 VIA P.B. #1 & CONNECT. (ENERGIZE)
- R-10 BANK "A" ELEV.
- a. - CUT EXIST. CDT. (R-13) & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-10 FROM BUS #EL TO EXIST. CDT. (R-13) & CONNECT
  - c. - CUT EXIST. FDR (R-10) IN EXIST. P.B. #1 & REMOVE FROM EXIST. CDT.
  - d. - INSTALL FDR. R-10 FROM BUS #EL TO EXIST. P.B. #1 & SPLICE TO LOAD SIDE. (ENERGIZE)

- R-11 BANK "E" FLEV.**
- a. - CUT EXIST. CDT. (X-2) & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-11 FROM BUS #EL TO EXIST. CDT. (X-2) & CONNECT
  - \* { c. - CUT EXIST. FDR (R-11) IN EXIST. P.B. #1 & REMOVE FROM EXIST. CDT.
  - d. - INSTALL FDR R-11 FROM BUS #EL TO EXIST. P.B. #1 & SPJCE TO LOAD SIDE. (ENERGIZE)
- R-12 BANK "C" FLEV.**
- a. - CUT EXIST. CDT. (X-1) & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-12 FROM BUS #EL TO EXIST. CDT. (X-1) & CONNECT
  - \* { c. - CUT EXIST. FDR (R-12) IN EXIST. P.B. #1 & REMOVE FROM EXIST. CDT.
  - d. - INSTALL FDR R-12 FROM BUS #EL TO EXIST. P.B. #1 & SPJCE TO LOAD SIDE. (ENERGIZE)
- R-4 DISCONNECT EXIST. ELEVATOR TRANSFER SWGR**  
(B-3)
- \* → a. - REMOVE FDR R-4 FROM EXIST. SWGR TO TRANSF. SW.
  - b. - REMOVE FDR B-3 FROM PNL EPC-75C TAP TO EXIST. TRANSF. SW VIA P.B. #1.
- C CONTROL FOR BANK ELEVATORS**
- a. - DISCONNECT & REMOVE CONTROL WIRING FROM EXIST. TERMINAL CABINET TO EXIST. TRANSFER SWITCH. DESIGNATED <2> ON DWG #E-95
- R-5 MOTOR CONTROL CENTER MCC-W75B**
- a. - INSTALL R-5 CDT & WIRE FROM SWGR. BUS #2 TO MCC-W75B VIA P.B. #1
  - \* → b. - DISCONNECT EXIST. & CONNECT FDR R-5 AT MCC-W75B (ENERGIZE)
  - c. - REMOVE EXIST. FDR BACK TO SWGR.
- R-B1 EMERGENCY LIT.**
- a. - CUT EXIST. CDT B-2 & REMOVE BACK TO EXIST. SWGR.
  - b. - INSTALL CDT. R-B1 FROM SWGR. BUS #2 TO CDT. (B-2) & CONNECT.
  - c. - INSTALL FDR R-B1 FROM SWGR. BUS #2 TO PNL EPC-75
  - \* { d. - DISCONNECT EXIST. & CONNECT FDR R-B1 IN PNL EPC-75B (ENERGIZE)
  - e. - REMOVE EXIST. FDR BACK TO SWGR.

- R-3 WATER SUPPLY PUMPS**
- a. - INSTALL R-3 CDT. & WIRE FROM SWGR BUS #2 TO P.B. #8
  - \* {
    - b. - CUT EXIST. FOR R-3 IN P.B. #8 & REMOVE BACK TO EXIST. SWGR.
    - c. - SPUCE TO EXIST. FOR (R-3) IN P.B. #8, (ENERGIZE)
- 1-6 PANEL DP-75W**
- a. - INSTALL 1-6 CDT. & WIRE FROM SWGR. BUS #1 TO PNL DP-75W.
  - \* — b. - DISCONNECT TEMPORARY & CONNECT FDR. 1-6 AT PANEL. (ENERGIZE)
  - c. - REMOVE TEMP. FDR. BACK TO SWGR.
- R-2b 480/727V ELEC. CLOS. "W" 727th TO 92nd FLR'S**
- FUTURE RUN 85th TO 92nd FLR'S**
- a. - INSTALL BUSWAY R-2b FROM SWGR. BUS #2 TO END CAP & "I" TO EXISTING BUSWAY R-2
  - \* {
    - b. - DISCONNECT EXIST. BUSWAY R-2 AND REMOVE BACK TO EXIST. SWGR.
    - c. - INSTALL BUSWAY TRANSITION BUS ON EXISTING BUSWAY & CONNECT BUSWAY R-2b. (ENERGIZE)
- R-2c 480/727V ELEC. CLOS. "W" FUTURE RUN 727th TO 84th FLR'S**
- a. - INSTALL BUSWAY R-2c FROM SWGR. BUS #1 TO CAP.

• I HEREBY CERTIFY THAT THIS IS A TRUE AND CORRECT COPY OF ONE OF THE CONTRACT DRAWINGS CONSTITUTING A PART OF CONTRACT NO. WTC-802.0 IN THE FORIA IN WHICH SAID DRAWINGS EXISTED AT THE TIME THE SAID CONTRACT WAS EXECUTED BY THE PARTIES.

DATE 6/21/95 Sultan A. Aslam  
SPEC. WRITER  
DATE 8/15/95 Peter K. Sweney  
ENGINEER OF DESIGN



RISER DIAGRAM  
STAGE III STEP (L) & (M)

- FOR COMPLETE STAGE III INSTALLATION SEE DWG. #E-0
- TRANSFER LOADS SHOWN ABOVE AS DESCRIBED IN THE SCHEDULE ABOVE.



**THE PORT AUTHORITY  
OF NY & NJ**

*Vik K. Sweeney*  
ENGINEERING PROGRAM MANAGER  
WORLD TRADE CENTER

*For [Signature]*  
CHIEF ELECTRICAL ENGINEER

Engineering Department	
Design Divisions	

# The World Trade Center Electrical/HVAC Upgrade Program

Title  
 TOWER ONE AND TWO  
 LOW VOLTAGE  
 SUBSTATIONS  
 CONSTRUCTION AND  
 INSTALLATION

**ELECTRICAL**

**SUBSTATION SS-75W  
STAGE III LOAD TRANSFER  
SCHEDULE AND  
RISER DIAGRAM**

No.	Date	Revision	Approved
-----	------	----------	----------

This drawing subject to conditions in contract.  
All inventions, ideas, designs and methods  
herein are reserved to Port Authority and  
may not be used without its written consent.

LEAHY/ FISCHER	LEAHY	A.S.
Designed by	Drawn by	Checked by

Date 5-1-95      Scale AS NOTED

Contract Number	Drawing Number
-----------------	----------------

WTC 802.071 E-76